

In re Patent Application of:

WOHLAND ET AL.

Serial No. 10/576,889

Filed: January 22, 2007

Confirmation No. 8309

In the Claims:

1. (Original) A screening method for at least two binding partners, which comprises:

labeling each binding partner with a fluorophore, characterized in that the at least two fluorophores have substantially the same single-photon excitation wavelength and different emission wavelengths;

detecting emission signals from the respective fluorophores at the different respective emission wavelengths; and

processing the detected emission signals to obtain fluorescence correlation spectroscopic data for screening the binding partners.

2. (Original) The method of claim 1, wherein one of the fluorophores has as a larger Stokes shift than the other.

3. (Original) The method of claim 2, characterized in that a relative Stokes shift difference between the fluorophores is greater than about 50nm.

4. (Original) The method of claim 3, characterized in that the relative Stokes shift difference between the fluorophores is greater than about 100nm.

In re Patent Application of:
WOHLAND ET AL.
Serial No. 10/576,889
Filed: **January 22, 2007**
Confirmation No. 8309

5. (Previously Presented) The method of claim 1, characterized in that at least one of the fluorophores comprises a nanocrystal or a quantum dot.

6. (Previously Presented) The method of claim 1, characterized in that at least one of the fluorophores comprises a fluorescent energy transfer dye.

7. (Previously Presented) The method of claim 1, characterized in that at least one of the fluorophores comprises a standard organic dye.

8. (Previously Presented) The method of claim 1, characterized in that the fluorophores comprise fluorescein and quantum red.

9. (Previously Presented) The method of claim 1, characterized in that the fluorophores comprise fluorescein and tetramethylrhodamine.

10. (Previously Presented) The method of claim 1, characterized in that the fluorophores comprise fluorescein and semiconductor nanocrystals.

11. (Previously Presented) The method of claim 1, characterized in that the fluorophores comprise 3 or more fluorophores.

In re Patent Application of:

WOHLAND ET AL.

Serial No. 10/576,889

Filed: January 22, 2007

Confirmation No. 8309

12. (Previously Presented) The method of claim 1, characterized in that the binding partners have a mass difference of less than a factor of 10.

13. (Original) The method of claim 12, characterized in that the binding partners have a mass difference of less than a factor of 8.

14. (Previously Presented) The method of claim 1, characterized in that the binding partners comprise biotin and streptavidin.

15. (Original) A biological screening apparatus for screening at least two binding partners, the system comprising:
a single laser beam source;

an optical system for directing the single laser beam onto the binding partners and for directing fluorescence emitted from the sample towards a spectrograph unit, wherein the fluorescence is emitted from at least two fluorophores labeled to different ones of the binding partners, the fluorophores having substantially the same single-photon excitation wavelength and different emission wavelengths;

the spectrograph unit separating the emitted fluorescence by wavelength;

a detector unit for detection of the fluorescence at respective different wavelengths; and

In re Patent Application of:

WOHLAND ET AL.

Serial No. **10/576,889**

Filed: **January 22, 2007**

Confirmation No. **8309**

a processing unit for obtaining fluorescence correlation spectroscopic data for screening the binding partners.